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LOUIS WOO LAW OFFICE OF LOUIS WOO 717 NORTH FAYETTE STREET ALEXANDRIA, VA 22314			EXAMINER RUDY, ANDREW J	
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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte KESAYOSHI IGUCHI, HIROYUKI TANAKA,
and TOMOYO INUI

Appeal 2008-0426
Application 09/488,527
Technology Center 3600

Decided: April 15, 2008

Before MICHAEL R. FLEMING, *Chief Administrative Patent Judge*, and
ALLEN R. MACDONALD and LINDA E. HORNER, *Administrative
Patent Judges*.

HORNER, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Kesayoshi Iguchi et al. (Appellants) seek our review under 35 U.S.C. § 134 of the final rejection of claims 1-33. We have jurisdiction under 35 U.S.C. § 6(b) (2002).

SUMMARY OF DECISION

We AFFIRM-IN-PART.

THE INVENTION

The Appellants' claimed invention is to a method and apparatus for processing customer's orders by displaying the orders in a kitchen (Spec. 1:6-10). Claim 1, reproduced below, is representative of the subject matter on appeal.

1. A method of processing customer's orders comprising the steps of:
 - (a) storing setting data for every article;
 - (b) inputting ordered articles and storing order data of said ordered articles;
 - (c) predicting quantities of said articles to be prepared in accordance with said stored order data in response to a command signal;
 - (d) displaying said quantities of said every article to be prepared at a given time period in accordance with said setting data in response to said command signal at a peak time; and
 - (e) displaying respective sets of input ordered articles at non-peak times.

THE REJECTIONS

The Examiner relies upon the following as evidence of unpatentability:

Cahlander	US 4,922,435	May 1, 1990
Savage	US 6,026,372	Feb. 15, 2000

The following rejections are before us for review:

1. Claims 1-33 are rejected under 35 U.S.C. § 112, first paragraph, for lack of an enabling disclosure.
2. Claims 1-33 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
3. Claims 1-33 are rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter.
4. Claims 1-33 are rejected under 35 U.S.C. § 103(a) as unpatentable over Savage and Cahlander.

ISSUES

The Examiner determined that the claimed subject matter is not enabled by the disclosure because the claims are missing critical or essential steps to the practice of the invention (Ans. 3). The Examiner further determined that the claims are indefinite due to these missing essential steps (Ans. 4). The Appellants contend that all of the essential steps have been set forth in the claims (App. Br. 12-13). The issue before us is whether the Appellants have shown that the Examiner erred in determining that the

claims are unpatentable under 35 U.S.C. § 112, first and second paragraphs. This issue turns on whether the claims recite all of the elements essential to the practice of the invention.

The Examiner found that the claims are directed to non-statutory subject matter, because there is no recognizable output of data and thus no practical application of the claimed subject matter (Ans. 4, 6.) The Appellants contend that method claims 1-15, 31, and 32 are drawn to processes that have practical applications and are not directed to an abstract idea (App. Br. 19-20). The Appellants contend that apparatus claims 16-30 and 33 “clearly recite means disclosed in the specification” and thus recite patentable subject matter (App. Br. 20). The issue before us is whether the Appellants have shown that the Examiner erred in rejecting claims 1-33 under 35 U.S.C. § 101 as directed to non-statutory subject matter.

The Examiner determined that to provide a method for displaying peak and non-peak order of food and computer-controlled command signals for the food predicting system of Savage would have been obvious to one of ordinary skill in the art in view of either Cahlander et al., US 4,922,435; Cahlander et al., US 5,132,914, or Cahlander et al. US 5,172,328 (Non-Final Office Action 3, dated December 10, 2002). The Appellants argue that “neither Savage nor Cahlander ‘328 discloses any display that displays the quantities of article to be prepared at a given time period in accordance with the setting data in response to a command signal at a peak time, and displaying respective sets of input ordered articles at non-peak times” (App.

Br. 25-26). The issue before us is whether the Appellants have shown that the Examiner erred in rejecting claims 1-33 under 35 U.S.C. § 103(a) as unpatentable over Savage and Cahlander. This issue turns on whether the combination of Savage and Cahlander would have led one having ordinary skill in the art to the particular display claimed.

FINDINGS OF FACT

We find that the following enumerated findings are supported by at least a preponderance of the evidence. *Ethicon, Inc. v. Quigg*, 849 F.2d 1422, 1427 (Fed. Cir. 1988) (explaining the general evidentiary standard for proceedings before the Office).

1. Savage relates to a computer system which maintains a current inventory of prepared foods and predicts future needs of the prepared foods (Savage, col. 1, ll. 6-9).
2. The computer system 10 includes an electronic cash register 11 electronically coupled to a cooking station monitor 12 and a manager's station monitor 15 (Savage, col. 2, ll. 18-21).
3. If the total quantity processed of a food item is less than the total quantity desired, a cooking instruction transmission means 47 causes a cooking instruction to be displayed upon the cooking station monitor 12 (Savage, col. 4, ll. 19-23 and 36-49).
4. Savage does not teach or suggest that the computer system displays quantities of food items to be prepared in accordance with setting data in response to a command signal. In particular, Savage does

not appear to use or take into account anything similar to the claimed setting data when it displays the cooking instructions on cooking station monitor 12.

5. Cahlander '435 discloses a fully automated food preparation device that incorporates computer-controlled robotics (Cahlander '435, col. 1, ll. 7-10).
6. Cahlander '435 discloses a control system "that controls and directs the robot to engage and transport the food container in sequence to and from the food dispenser and to and from the cooking station in a frequency determined by the controlling apparatus based on the actual and/or anticipated frequency and quantity of food products ordered by customers" (Cahlander '435, col. 3, ll. 47-53).
7. Starting with files in memory, the computer generates a schedule of planned activities for the overall day in general terms and a more detailed plan for the short-term period. As the day progresses, the computer compares the planned activities to what is actually happening as orders are processed from the point-of-sale devices, and if the actual data differs significantly from the planned activities, the plans can be modified, either automatically or by an operator, on the fly (Cahlander '435, col. 8, ll. 19-43).

8. Cahlander '435 does not disclose or suggest the use of setting data or displaying quantities of food items to be prepared in accordance with setting data in response to a command signal.

PRINCIPLES OF LAW

35 U.S.C. § 112, first paragraph

The PTO bears the initial burden when rejecting claims for lack of enablement.

When rejecting a claim under the enablement requirement of section 112, the PTO bears an initial burden of setting forth a reasonable explanation as to why it believes that the scope of protection provided by that claim is not adequately enabled by the description of the invention provided in the specification of the application; this includes, of course, providing sufficient reasons for doubting any assertions in the specification as to the scope of enablement. If the PTO meets this burden, the burden then shifts to the applicant to provide suitable proofs indicating that the specification is indeed enabling.

In re Wright, 999 F.2d 1557, 1561-62 (Fed. Cir. 1993) (citing *In re Marzocchi*, 439 F.2d 220, 223-24 (CCPA 1971)).

35 U.S.C. § 112, second paragraph

The test for definiteness under 35 U.S.C. § 112, second paragraph, is whether “those skilled in the art would understand what is claimed when the claim is read in light of the specification.” *Orthokinetics, Inc. v. Safety Travel Chairs, Inc.*, 806 F.2d 1565, 1576 (Fed. Cir. 1986) (citations omitted).

35 U.S.C. § 101

The “useful arts” in the Constitution are implemented by Congress in the statutory categories of eligible subject matter in 35 U.S.C. § 101. Section 101 states, “Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.” 35 U.S.C. § 101 (2002). Although it has been said that through the 1952 Patent Act “Congress intended statutory subject matter to include anything under the sun that is made by man,” *Diamond v. Chakrabarty*, 447 U.S. 303, 309 (1980) (quoting S. Rep. No. 1979, 82d Cong., 2d Sess., 5 (1952); H.R. Rep. No. 1923, 82d Cong., 2d Sess., 6 (1952) (internal quotation marks omitted)), the Supreme Court has said that this statement does “not ... suggest that § 101 has no limits or that it embraces every discovery.” *Id.* “The obligation to determine what type of discovery is sought to be patented [so as to determine whether it is “the kind of ‘discoveries’ that the statute was enacted

to protect”] *must precede* the determination of whether that discovery is, in fact, new or obvious.” *Parker v. Flook*, 437 U.S. 584, 593 (1978) (emphases added).

The Federal Circuit recently held that a process was not patentable subject matter under § 101. *In re Comiskey*, 499 F.3d 1365 (Fed. Cir. 2007). The Federal Circuit stated that “Supreme Court decisions after the 1952 Patent Act have rejected a ‘purely literal reading’ of the process provision and emphasized that not every ‘process’ is patentable.” *Id.* at 1375 (quoting *Flook*, 427 U.S. at 589). Rather “[t]he question is whether the method described and claimed is a ‘process’ within the meaning of the Patent Act.” *Id.* (quoting *Gottschalk v. Benson*, 409 U.S. 63, 64 (1972)).

In *Comiskey*, the court held that claims directed to a method for mandatory arbitration resolution were unpatentable under § 101 because “the patent statute does not allow patents on particular systems that depend for their operation on human intelligence alone, a field of endeavor that both the framers and Congress intended to be beyond the reach of patentable subject matter.” *Id.* at 1378-79. Thus, the holding in *Comiskey* established that “the application of human intelligence to the solution of practical problems is not in and of itself patentable.” *Id.* at 1379. More broadly, the court stated:

The Supreme Court has reviewed process patents reciting algorithms or abstract concepts in claims directed to industrial processes. In that context, the Supreme Court has held that a claim reciting an algorithm or abstract idea can state statutory subject matter only if, as employed in the process, it is embodied in, operates on, transforms, or

otherwise involves another class of statutory subject matter, i.e., a machine, manufacture, or composition of matter. 35 U.S.C. § 101.

Id. at 1376. Insofar as we know, applicable Federal Circuit precedent has never held that a non-machine implemented process involving no transformation of a physical object can qualify as a “process” under § 101. In fact, confronted with such claims, it has rejected them consistently. *See In re Schrader*, 22 F.3d 290 (Fed. Cir. 1994); *In re Grams*, 888 F.2d 835 (Fed. Cir. 1989) (rejecting claims to a method of evaluating a system that incorporated a mathematical algorithm, where the only physical step was a data gathering step that was not tied to the algorithm); *In re Maucorps*, 609 F.2d 481, 484 (CCPA 1979); *In re Meyer*, 688 F.2d 789, 796 (CCPA 1982); *see also In re Alappat*, 33 F.3d 1526, 1541 (Fed. Cir. 1994) (en banc) (“Maucorps dealt with a business methodology for deciding how salesmen should best handle respective customers and Meyer involved a ‘system’ for aiding a neurologist in diagnosing patients. Clearly, neither of the alleged ‘inventions’ in those cases falls within any § 101 category.”).

In *Schrader*, the Federal Circuit affirmed a § 101 rejection of a method of competitively bidding on a plurality of related items, relying in part on the *Freeman-Walter-Abele* (“FWA”) test. However, the Federal Circuit also inquired into whether *Schrader*’s non-machine implemented method claim performed any kind of transformation. *Schrader*, 22 F.3d at 294 (“we do not find in the claim any kind of data transformation.”).

Schrader expressly concludes that “a process claim [in] compliance with Section 101 requires some kind of transformation or reduction of subject matter.” *Id.* at 295.

Whether a method is appropriately tied to a particular apparatus to qualify as a section 101 process may not always be a straightforward inquiry. As *Comiskey* recognized, “the mere use of the machine to collect data necessary for application of the mental process may not make the claim patentable subject matter.” *Comiskey*, 499 F.3d at 1380 (citing *In re Grams*, 888 F.2d 834, 839-40 (Fed. Cir. 1989)). In other words, nominal or token recitations of structure in a method claim should not convert an otherwise ineligible claim into an eligible one. For the same reason, claims reciting incidental physical transformations also may not pass muster under section 101. To permit such a practice would exalt form over substance and permit claim drafters to file the sort of process claims not contemplated by the case law.

Once a determination is made that a claim is properly directed to one of the four statutory classes of subject matter, then one must examine whether the claim, nonetheless, is directed to one of the judicially-recognized exclusions to patentable subject matter:

A principle, in the abstract, is a fundamental truth; an original cause; a motive; these cannot be patented, as no one can claim in either of them an exclusive right. Phenomena of nature, though just discovered, mental processes, and abstract intellectual concepts are not patentable, as they are

the basic tools of scientific and technological work.

Flook, 437 U.S. at 589 (internal quotation marks and citations omitted).

35 U.S.C. § 103

“Section 103 forbids issuance of a patent when ‘the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.’” *KSR Int’l Co. v. Teleflex Inc.*, 127 S.Ct. 1727, 1734 (2007). The question of obviousness is resolved on the basis of underlying factual determinations including (1) the scope and content of the prior art, (2) any differences between the claimed subject matter and the prior art, (3) the level of skill in the art, and (4) where in evidence, so-called secondary considerations. *Graham v. John Deere Co.*, 383 U.S. 1, 17-18 (1966). *See also KSR*, 127 S.Ct. at 1734 (“While the sequence of these questions might be reordered in any particular case, the [*Graham*] factors continue to define the inquiry that controls.”)

ANALYSIS

Rejection of claims 1-33 under 35 U.S.C. § 112, first paragraph

The Examiner determined that “[t]he storing of setting data for every article, processing of or preparing of orders, each critical or essential to the practice of the invention, but not included in the claim(s) is not enabled by

the disclosure” (Ans. 3, citing *In re Mayhew*, 527 F.2d 1229 (CCPA 1976)). The Examiner further stated that “Applicant does not have any tangible result claimed. No order is processed, nor does any type of entity, e.g., a monitor, display any ordered articles.” (Ans. 5.) The Appellants contend that “the examiner has erred in stating that the essential steps have not been set forth in the claims” (App. Br. 13).

We are perplexed by the Examiner’s statement that the storing of setting data for every article is not included in the claims, because it is recited as the first limitation in each of the independent claims at issue. For example, claims 1 and 32 recite in step (a), “storing setting data for every article,” and claims 16 and 33 recite “storing means for storing setting data for every article.” Only claim 31 uses slightly different wording, where it recites in step (a), “inputting and storing data of articles in accordance with orders by customers.” We note, however, that the Appellants appear to have intended this “data” of step (a) to be setting data, because step (c) refers back to “said setting data” for which there is insufficient antecedent basis in claim 31 because the word “setting” was omitted from step (a).

We are also perplexed by the Examiner’s statement that the claims do not display ordered articles, because a display is recited in each of the independent claims at issue. For example, the last two steps of claims 1 and 31 and the last step of claim 32 recite displaying articles to be prepared and claims 16 and 33 recite display means for displaying articles to be prepared.

As for the alleged missing critical element of preparing the orders, the Examiner relies on *Mayhew*. In *Mayhew*, the court affirmed the Board's rejection of claims that failed to recite an essential cooling bath step in a claim to a method for producing an alloy coating, stating, "Although appellant now strenuously argues that the cooling bath is optional, his specification not only fails to support this contention, but leads us, as it did the examiner and board, to believe that both it and its location are essential." *Id.* at 1233. As such, the court in *Mayhew* held that "claims which fail to recite the use of a cooling zone, specially located, are not supported by an enabling disclosure." *Id.*

The Examiner has not pointed to anything in Appellants' Specification that indicates the step of preparing orders is an essential step in the Appellants' claimed invention. Rather, the Specification makes clear that the invention lies in the way in which the orders are displayed to the cook in the kitchen (Spec. 1:8-10 and 13:1-5). Thus, the essential elements of the invention do not include the cook actually preparing the ordered food. As such, we will not sustain the Examiner's rejection of claims 1-33 under 35 U.S.C. § 112, first paragraph for lack of an enabling disclosure.

Rejection of claims 1-33 under 35 U.S.C. § 112, second paragraph

The Examiner found that "Appellant needs another step of processing or preparing an order to satisfy the 35 U.S.C. 112 requirements" (Ans. 6). The Appellants contend that "the steps recited in the method claims do

adequately point out and distinctly define the metes and bounds of the subject matter to be protected” (App Br. 13).

For the reasons provided *supra* for the enablement rejection, we find that the claims are not indefinite in that they do not require an additional step of processing or preparing an order. As such, we will not sustain the Examiner’s rejection of claims 1-33 under 35 U.S.C. § 112, second paragraph.

Rejection of claims 1-33 under 35 U.S.C. § 101

The Examiner found that the claim language does not provide any concrete, useful or tangible results, stating, “One could merely draw a picture on a piece of paper or a chalk board to display the quantities of every article to be prepared or sets of input ordered articles at non-peak times” and thus “Their [sic] is no recognizable output of data, e.g. preparing orders as a result of the previous method claim steps. Thus, the Examiner evidences no practical applications.” (Ans. 4, 6.)

The Appellants contend that claims 1-15, 31, and 32 are drawn to processes that have practical applications in that the processes “each produce a useful, concrete and tangible result” (App. Br. 19). In particular, the Appellants contend that the claims recite the input and storage of actual data, a predicting step, and displaying steps, such that the claimed subject matter is not an abstract idea (App. Br. 19-20). The Appellants contend that

apparatus claims 16-30 and 33 “clearly recite means disclosed in the specification” and thus recite patentable subject matter (App. Br. 20).

We first review the rejection of method claims 1-15, 31, and 32. The method claims at issue relate to processing of customer’s orders. The claims do not require a computer or other machine to be involved in performing the method steps. The claimed steps could be performed completely by human activity and are not embodied in, operate on, transform, or otherwise involve another class of statutory subject matter, i.e., a machine, manufacture, or composition of matter.

For example, step (a) of claim 1 recites storing setting data, but it does not recite, for example, that the setting data is stored in a computer memory. Similarly, step (b) of claim 1 recites inputting ordered articles. This step could be accomplished by a clerk merely verbally repeating the ordered articles to the cook. Likewise, the command signal of step (c) is broad enough to encompass a manager verbally commanding the cook to begin preparation of the order. Finally, the displaying steps could be implemented by the cook merely writing down the quantities of articles to be prepared or writing down the sets of input orders. Steps (d) and (e) do not recite that the displaying step occurs on a computer monitor. Method claims 31 and 32 suffer from the same deficiencies as claim 1. Dependent claims 2-4 and 7-15 similarly do not require a machine. Dependent claims 5 and 6 specify providing a push switch and rotary switch, respectively, for generating a command signal. Such nominal recitations of structure in a method claim do

not convert this otherwise ineligible subject matter into statutory subject matter. Likewise, the arguable physical transformation of a piece of paper that may be used to implement the displaying step does not render the claim statutory, because such a transformation is merely incidental to the performance of the claimed method rather than the invention being directed primarily to the transformation of the paper itself. It is merely a means by which to display the ordered items.

As such, claims 1-15, 31 and 32 are not directed to a statutory “process” under 35 U.S.C. § 101, and thus our inquiry ends here, and we will sustain the rejection of claims 1-15, 31, and 32 as being directed to non-statutory subject matter.

Apparatus claims 16-30 and 33 are directed to a customer’s order processing apparatus, and thus are directed to one of the four statutory classes of patentable subject matter, i.e., a machine. We must now examine whether the subject matter of claims 16-30 and 33 falls within the judicially-recognized abstract idea exclusion to patentable subject matter. The Examiner held that because there is no recognizable output of data, the claims are directed to abstract ideas. We disagree.

Each of claims 16-30 and 33 require a display (i.e., an output) of data, wherein the data is displayed in a particular manner. For example, the display means of claim 16 displays quantities of articles to be prepared in accordance with setting data during peak times and displays sets of input ordered articles at non-peak times. The display means of claim 33 also displays quantities of articles to be prepared in accordance with setting data.

As discussed *infra*, the claimed display does not show quantities for every article ordered. Rather, the display shows quantities only for those articles having a corresponding “1” code in the stored setting data. The claimed display is more than just a display of quantities resultant from the predicting algorithm, and, as such, the claims are not directed to an abstract idea. In other words, assuming that the predicting algorithm is in the prior art, the application, considered as a whole, still contains a patentable invention, as discussed *infra*. As such, the claims are directed to an inventive application of the predicting principle, and are thus directed to patentable subject matter. *See Flook*, 437 U.S. at 594. Accordingly, we will not sustain the rejection of claims 16-30 and 33 under 35 U.S.C. § 101.

Rejection of claims 1-33 under 35 U.S.C. § 103(a) as unpatentable over Savage and Cahlander

The Appellants argue that “neither Savage nor Cahlander ‘328 discloses any display that displays the quantities of article to be prepared at a given time period in accordance with the setting data in response to a command signal at a peak time, and displaying respective sets of input ordered articles at non-peak times” (App. Br. 25-26). We agree.

Each of the independent claims at issue recites that the method or apparatus display quantities of articles to be prepared “in accordance with said setting data.” Based on the description of setting data provided in Appellants’ Specification, we understand this displaying step to mean that the system maintains a table of all of the articles of food on the menu with a

corresponding “1” or “0” code for each article. When the system displays quantities of articles to be prepared (such as in step (d) of claim 1), the system will display quantities only for those articles of food that have a corresponding “1” code in the setting data. If the article has a “0” code in the setting data, then the system will not display quantities for that article (*See e.g.*, Spec. 14:23-25 and Figs. 2 and 4). Neither Savage nor Cahlander teaches or suggests displaying quantities of food items to be prepared in accordance with setting data in response to a command signal (Facts 1-8). As such, we will not sustain the rejection of claims 1-33 under 35 U.S.C. § 103(a) as unpatentable over Savage and Cahlander.

CONCLUSIONS OF LAW

We conclude the Appellants have shown that the Examiner erred in rejecting claims 1-33 under 35 U.S.C. § 112, first and second paragraphs and under 35 U.S.C. § 103. The Appellants have further shown that the Examiner erred in rejecting claims 16-30 and 33 under 35 U.S.C. § 101; however, the Appellants have not shown that the Examiner erred in rejecting claims 1-15, 31, and 32 under 35 U.S.C. § 101.

DECISION

The decision of the Examiner to reject claims 1-15, 31, and 32 is affirmed, and the decision of the Examiner to reject claims 16-30 and 33 is reversed.

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No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv) (2007).

AFFIRMED-IN-PART

vsh

LOUIS WOO
LAW OFFICE OF LOUIS WOO
717 NORTH FAYETTE STREET
ALEXANDRIA VA 22314